

Material Safety Data Sheet

BIO CLEAR® 1000

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	1
PERSONAL PROTECTION	I

1. Product and Company Identification

Material name	BIO CLEAR® 1000
Patent Number	Not available
Revision date	March-04-2009
Version No.	3
CAS #	Mixture
Product use	Biocide
Manufacturer information	Clearwater International L.L.C. 100 Leetsdale Industrial Drive Leetsdale, PA 15056 US CHEMTREC 1-800-424-9300/703-527-3887
Emergency	CHEMTREC 1-800-424-9300/703-527-3887
Supplier information	Clearwater International L.L.C. 4420 South Flores Rd. Elmendorf, TX 78112 US
Supplier emergency telephone number(s)	CHEMTREC 1-800-424-9300/703-527-3887

2. Hazards Identification

Emergency overview	DANGER Acute health hazard. Corrosive. Skin contact may cause an allergic skin reaction. Highly toxic to fish and/or other aquatic organisms. May cause sensitization by skin contact. Lachrymator. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Eyes	May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.
Skin	Prolonged contact may cause severe skin irritation with local redness and discomfort. Repeated exposure may cause irritation, even a burn. Not classified as corrosive to the skin according to DOT guidelines.
Inhalation	Vapors are unlikely due to physical properties. Prolonged excessive exposure to dust may cause serious adverse effects, even death. Excessive exposure may cause severe irritation to upper respiratory tract (nose and throat) and lungs. May cause severe pulmonary edema (fluid in the lungs). Prolonged and excessive exposure to fine dusts may cause lung injury.

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Ingestion

Moderate toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause serious injury, even death.

Chronic effects

Excessive exposure may increase the blood and tissue levels of bromine. Observations in animals include kidney effects following repeated ingestion of active ingredient, but no evidence of systemic toxicity following repeated dermal exposure at maximum attainable doses.

3. Composition / Information on Ingredients

Components	CAS #	Percent
2,2-dibromo-3-nitrilopropionamide	10222-01-2	90 - 100

4. First Aid Measures

First aid procedures

Eye contact

Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.

Skin contact

Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Get medical attention.

Inhalation

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If the affected person is not breathing, apply artificial respiration. Call a physician if symptoms develop or persist.

Ingestion

Have victim rinse mouth thoroughly with water. Do not induce vomiting without medical advice. If ingestion of a large amount does occur, seek medical attention.

General advice

If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties

Not a fire hazard. The product is not flammable.

Extinguishing media

Suitable extinguishing media

Dry chemical, CO₂, water spray or regular foam.

Protection of firefighters

Protective equipment and precautions for firefighters

Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

6. Accidental Release Measures

Personal precautions

Local authorities should be advised if significant spillages cannot be contained. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unnecessary personnel away. Stay upwind. Keep out of low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Methods for containment

Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.



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Methods for cleaning up

Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. After removal flush contaminated area thoroughly with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

Never return spills in original containers for re-use.

Other information

Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling

Use only with adequate ventilation. Do not get this material in contact with eyes. Avoid contact with skin and eyes. Do not breathe dust or mist. Keep container closed. Use care in handling/storage. Wash thoroughly after handling.

Storage

Do not store together with. Aluminium Keep the container dry. Store in accordance with local/regional/national/international regulation.

8. Exposure Controls / Personal Protection

Engineering controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye / face protection

Wear chemical goggles. Selection of specific items such as faceshield, boots, apron, or full-body suit will depend on the task.

Skin protection

Chemical resistant apron or protective suit if splashing or contact with solution is likely. Wear chemical protective equipment that is specifically recommended by the manufacturer. Wear appropriate chemical resistant gloves.

Respiratory protection

Maintain material's vapors, fumes, or particulate ambient levels below any levels of concern. A NIOSH- approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. No personal respiratory protective equipment normally required.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance

Powder.

Color

White to yellow.

Odor

Mild pungent.

Odor threshold

Not available

Physical state

Solid.

Form

Solid

pH

Not available

Melting point

Not available

Freezing point

Not available

Boiling point

Not available

Flash point

N/D

Evaporation rate

Not available



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Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Vapor pressure	Not available
Vapor density	0.934 g/ml
Specific gravity	Not available
Relative density	Not available
Solubility (water)	1.5 % @ 25 C
Partition coefficient (n-octanol/water)	0.79
Auto-ignition temperature	Not available
Decomposition temperature	Not available

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under recommended storage conditions. Unstable at elevated temperatures.
Conditions to avoid	Avoid temperatures above 70°C (159°F) Product decomposes above melting temperature. Generation of gas during decomposition can cause pressure in closed systems.
Incompatible materials	Incompatible with bases, metals, oxidizing agents, acids.
Hazardous decomposition products	Decomposition products depend upon temperature, air supply, and the presence of other materials. Decomposition products can include and are not limited to: Carbon dioxide. Dibromoacetonitrile. Hydrogen bromide. Nitrogen oxides. Decomposition products can include trace amounts of: Cyanogen bromide.
Possibility of hazardous reactions	Will not occur under normal conditions.

11. Toxicological Information

Sensitization	Allergic reactions
Chronic effects	Excessive exposure may increase the blood and tissue levels of bromine. Observations in animals include kidney effects following repeated ingestion of active ingredient, but no evidence of systemic toxicity following repeated dermal exposure at maximum attainable doses.
Carcinogenicity	Not expected to be hazardous by OSHA criteria.
Neurological effects	Not expected to be hazardous by OSHA criteria.
Further information	This product has no known adverse effect on human health.

12. Ecological Information

Ecotoxicity	Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested). Material is practically non-toxic to birds on a dietary basis (LC50>5000 ppm).
Persistence and degradability	Degradation is expected in the soil environment within minutes to hours. Chemical degradation (hydrolysis) is expected in the environment). Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

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13. Disposal Considerations

Disposal instructions

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANYBODY OF WATER. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

14. Transport Information

Department of Transportation (DOT) Requirements

Basic shipping requirements:

Proper shipping name	Toxic solids, organic, n.o.s. (2,2-DIBROMO-3-NITRILOPROPIONAMIDE)
Hazard class	6.1
UN number	UN2811
Packing group	III
Additional information:	
Special provisions	IB8, IP3, T1, TP33
Packaging exceptions	153
Packaging non bulk	213
Packaging bulk	240
ERG number	154

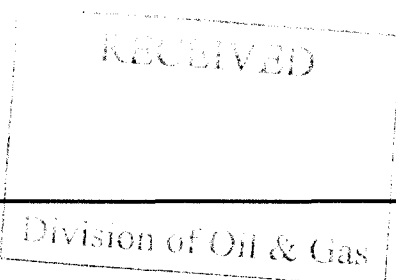


Department of Transportation (DOT) Requirements

Bulk

Basic shipping requirements:

Proper shipping name	Toxic solids, organic, n.o.s. (2,2-DIBROMO-3-NITRILOPROPIONAMIDE)
Hazard class	6.1
UN number	UN2811
Packing group	III
Additional information:	
Special provisions	IB8, IP3, T1, TP33
Packaging exceptions	153
Packaging non bulk	213
Packaging bulk	240
ERG number	154





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Canadian Transportation of Dangerous Goods (TDG) Requirements

Basic shipping requirements:

Proper shipping name	TOXIC SOLID, ORGANIC, N.O.S. (2,2-DIBROMO-3-NITRILOPROPIONAMIDE)
Hazard class	6.1
UN number	UN2811
Packing group	III
Marine pollutant	•
Additional information:	
Special provisions	16
ERG number	154



IMDG

Basic shipping requirements:

Proper shipping name	TOXIC SOLID, ORGANIC, N.O.S. (2,2-DIBROMO-3-NITRILOPROPIONAMIDE)
Hazard class	6.1
Subsidiary hazard class	•
UN number	2811
Packing group	III



IATA

Basic shipping requirements:

Proper shipping name	Toxic solid, organic, n.o.s. (2,2-DIBROMO-3-NITRILOPROPIONAMIDE)
Hazard class	6.1
UN number	2811
Packing group	III



15. Regulatory Information

Labelling

Contains 2,2-dibromo-3-nitrilopropionamide

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

U.S. - FDA - Direct Food Additives

2,2-dibromo-3-nitrilopropionamide 10222-01-2 21 CFR 173.320

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

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CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

HMIS® ratings

Health: 3
Flammability: 1
Physical hazard: 1
Personal protection: I

NFPA ratings

Health: 3
Flammability: 1
Instability: 1

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MSDS sections updated

This document has undergone significant changes and should be reviewed in its entirety.

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Division of Oil & Gas